

# The Scalar-photon Coupling with Mie Invariant Within the Scope of Bianchi Type-I Cosmological Model

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## Abstract

© 2015, Springer Science+Business Media New York. We investigate the Bianchi type-I cosmological model with the scalar and electromagnetic fields possessing non-minimal couplings. They contain the Mie invariant that leads to the flat Friedman's cosmological model. We found the lagrangian for interaction, which the isotropization process of the expansion takes place. Two cases are considered, when the Mie invariant is constat or time-dependent. We study the canonical scalar field and the phantom one.

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## Keywords

Bianchi type I model, Generalized electrodynamics, Scalar field